

CLAIMS:

1. A dual stack optical data storage medium for recording and reading by means of a focused radiation beam entering the medium through a first radiation beam entrance face, said medium having at least a first substrate with on at least one side of the first substrate:
- 5 - a first layer stack, comprising a first information layer,
- a second layer stack, comprising a second information layer, said first layer stack being present at a position closer to the first radiation beam entrance face than the second layer stack,
- a first transparent spacer layer between the first layer stack and the second
- 10 layer stack, characterized in that the first information layer is one selected from the group of types consisting of a read only layer and a write once layer, and that the second information layer is one selected from the group of types consisting of a read only layer, a write once layer and a rewritable layer, and that the type of the first information layer is different from the type of the second information layer.
- 15
2. A dual stack optical data storage medium as claimed in claim 1, wherein the second information layer is a rewritable layer.
3. A dual stack optical data storage medium as claimed in any one of claims 1 or
- 20 2, wherein the first radiation beam entrance face is in a first protective cover layer separate from the first substrate.
4. A dual stack optical data storage medium as claimed in any one of claims 1 -
- 25 3, wherein the medium further comprises a second radiation beam entrance face opposite from the first radiation beam entrance face and
- a third layer stack, comprising a third information layer selected from the group consisting of a read only layer and a write once layer,
- a fourth layer stack, comprising a fourth information layer selected from the group consisting of a read only layer, a write once layer and a rewritable layer, said third

layer stack being present at a position closer to the second radiation beam entrance face than the fourth layer stack,

- a second transparent spacer layer between the third layer stack and the fourth layer stack, and that the type of the third information layer is different from the type of the fourth information layer.

5 5. A dual stack optical data storage medium as claimed in claims 3 and 4, wherein the second radiation beam entrance face is in the first substrate.

10 6. A dual stack optical data storage medium as claimed in claims 3 and 4, wherein the second radiation beam entrance face is in a second protective cover layer.

7. A dual stack optical data storage medium as claimed in any one of claims 4, 5 or 6 wherein the fourth information layer is a rewritable layer.

15

8. A dual stack optical data storage medium as claimed in any one of claims 1, 2, 4 or 7, wherein the effective reflection level of the stacks is at least 0.18 at a radiation beam wavelength of approximately 655 nm.

20

9. A dual stack optical data storage medium as claimed in any one of claims 3, 6 or 7, wherein the effective reflection level of the stacks is at least 0.04 at a radiation beam wavelength of approximately 405 nm.

25

10. A dual stack optical data storage medium as claimed in any one of claims 5 or 7, wherein the effective reflection level of the first and second stack is at least 0.04 at a radiation beam wavelength of approximately 405 nm and the effective reflection level of the third and fourth stack is at least 0.18 at a radiation beam wavelength of approximately 655 nm.